

CLAIMS:

1. A prosthetic implant for surgical implantation in a hand of a patient comprising an elongate flexible member for passing snugly around a surgically exposed bone of the hand,
5 the elongate flexible member having first and second end portions at opposite ends thereof, the first end portion of the elongate flexible member being provided with slot defining means defining a slot for receipt of the second end portion of the elongate flexible member, and locking means
10 to secure the second end portion to the first end portion after insertion of the second end portion in the slot.
2. A prosthetic implant according to claim 1, wherein the second end portion is substantially rectangular in cross section and wherein the slot defining means comprises a
15 sleeve portion defining a substantially rectangular slot for receipt of the second end portion.
3. A prosthetic implant according to claim 1, wherein the second end portion is substantially rectangular in cross section and wherein the slot defining means comprises a
20 sleeve portion defining an open topped slot for receipt of the second end portion.
4. A prosthetic implant according to claim 1, wherein the second end portion is substantially rectangular in cross section and wherein the slot defining means comprises a
25 sleeve portion defining a substantially C-section slot for receipt of the second end portion.
5. A prosthetic implant according to any one of claims 1 to 4, wherein the slot has an axis which is aligned substantially parallel to the axis of the first end portion.
- 30 6. A prosthetic implant according to any one of claims 1 to 4, wherein the slot has an axis which is aligned substantially perpendicular to the axis of the first end portion.

7. A prosthetic implant according to any one of claims 1 to 6, wherein the elongate flexible member has a bone-contacting surface which is adapted to contact a bone of a hand of a patient to which the prosthetic implant is to be secured and which is roughened to improve the gripping action of the elongate flexible member on the bone.

8. A prosthetic implant according to claim 7, wherein the bone-contacting surface of the flexible elongate member is provided with spikes or ridges to relieve uniform pressure on the bone to which it is to be attached and to improve the grip of the elongate flexible member on the bone.

9. A prosthetic implant according to any one of claims 1 to 8, wherein there is further provided a flexor tendon support means adapted upon implantation thereof in a hand of a patient around a metacarpal bone thereof to pass under the ulnar side of the flexor tendons of the corresponding finger of the patient.

10. A prosthetic implant according to claim 9, wherein the flexor tendon support means comprises a hook-shaped appendage attached to the elongate flexible member and adapted for passing around the ulnar side of the flexor tendons of the finger, the hook-shaped appendage having an axis extending substantially in the plane of the axis of the flexible elongate member.

11. A prosthetic implant according to claim 9, wherein the flexor tendon support means comprises a band attached at one end thereof to the elongate flexible member and adapted to pass on the ulnar side of the flexor tendons of the finger and wherein the slot defining means further defines a second slot to receive a free end portion of the band at the opposite end from the one end thereof, the band having an axis which is substantially parallel to the axis of the elongate flexible member.

12. A prosthetic implant according to any one of claims 9 to 11, wherein the flexor tendon support means is integrally formed with the strap.

13. A prosthetic implant according to any one of claims 1
5 to 8, wherein the elongate flexible member comprises a saddle shaped portion provided with a bearing surface adapted upon implantation of the prosthetic implant in the hand of a patient to underlie the flexor tendons of the
10 finger on the ulnar side thereof, and first and second strap portions integrally formed with the saddle shaped portion and disposed so that the first strap portion extends from the saddle shaped portion on one side of the bearing surface and the second portion extends substantially in alignment
15 with the first strap portion from the saddle shaped portion on the other side of the bearing surface.

14. A prosthetic implant according to claim 13, wherein the slot defining means comprises a bridge portion integrally
formed with the first strap portion and defining a substantially rectangular slot and wherein the second strap
20 portion is of substantially rectangular cross section and adapted for reception in the substantially rectangular slot.

15. A prosthetic implant according to claim 13, wherein the slot defining means comprises a pair of cantilever portions
defining with the first strap portion a substantially C-
25 shaped section providing a slot for reception of the second strap portion and wherein the second strap portion is substantially of rectangular cross section and adapted for reception in the slot.

16. A prosthetic implant according to any one of claims 13
30 to 15, wherein ribs are provided on each of the first and second strap portions adjacent the saddle shaped portion and adapted for contacting the patient's metacarpal bone so as to space the bearing surface therefrom and facilitate blood

supply to the periosteum.

17. A prosthetic implant according to any one of claims 13 to 16, wherein the first strap portion is provided on a side thereof corresponding to the bearing surface with a
5 plurality of grooves which separate corresponding lands one from another.

18. A prosthetic implant according to any one of claims 1 to 17, wherein the locking means comprises a series of teeth provided on the second strap portion and a corresponding
10 series of teeth on the inside of the slot adapted to engage with the teeth on the second strap portion.

19. A prosthetic implant according to any one of claims 1 to 17, wherein the locking means comprises a plug adapted for passage through a bore made in overlapping ends of the
15 first and second strap portions and extending substantially transversely into the patient's metacarpal bone.

20. A prosthetic implant according to claim 19, wherein the plug has a snap fit end for engagement in the bore in the patient's metacarpal bone.

20 21. A prosthetic implant according to any one of claims 1 to 20, wherein the elongate flexible member is adapted for passing snugly around a surgically exposed metacarpal bone of the hand and wherein the implant further includes a secondary member adapted for engagement with a corresponding
25 phalangeal bone of the hand and flexibly connected to the elongate flexible member.

22. A prosthetic implant according to claim 21, wherein the secondary member comprises a further elongate flexible member adapted for passing snugly round the phalangeal bone,
30 the further elongate flexible member having third and fourth end portions at opposite ends thereof, the third end portion of the further elongate flexible member being provided with second slot defining means defining a second slot for

receipt of the fourth end portion of the further elongate flexible member, and second locking means to secure the fourth end portion to the third end portion after insertion of the fourth end portion in the slot.

5 23. A prosthetic implant according to claim 22, wherein the elongate flexible member which is adapted for passing snugly around the surgically exposed metacarpal bone of the hand and is connected by spring means to the secondary member which is adapted for engagement with a corresponding
10 phalangeal bone of the hand.

24. A prosthetic implant according to any one of claims 1 to 20, wherein the elongate flexible member is adapted for passing snugly around a surgically exposed metacarpal bone of the hand and wherein the implant further includes
15 flexible attachment means flexibly connected to the elongate flexible member and adapted for securement to a corresponding phalangeal bone of the hand.

25. A prosthetic implant according to claim 24, wherein the flexible attachment means is adapted for securement to the
20 phalangeal bone by means of pins, staples, or adhesive.

26. A prosthetic implant according to any one of claims 1 to 20, wherein the elongate flexible member is adapted for passing snugly around a surgically exposed metacarpal bone of the hand and is provided with a lateral hook-shaped
25 member whose free end is adapted for insertion in a surgically prepared cavity in the metacarpal bone intended for receipt of a metacarpal part of a total metacarpal phalangeal joint replacement.

27. A sterilised package containing a prosthetic implant
30 according to any one of claims 1 to 26.